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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,608	06/20/2006	Koji Hagiya	023174-0166	2628

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EXAMINER	
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ART UNIT	PAPER NUMBER
1626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,608	HAGIYA, KOJI	
	Examiner	Art Unit	
	REI-TSANG SHIAO	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *1-12,16 and 18-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-15 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/20/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application claims benefit of the foreign applications:

JAPAN 2003-429133 with a filing date 12/25/2003; JAPAN 2003-429134 with a filing date 12/25/2003; JAPAN 2004-068703 with a filing date 03/11/2004 and JAPAN 2004-182102 with a filing date 06/21/2004. However, the English-translated version of the certified foreign priority documents have not bee filed, the instant foreign priority has not been granted.

2. Claims 1-21 are pending in the application.

Information Disclosure Statement

3. Applicant's Information Disclosure Statement filed on June 20, 2006 has been considered. Please refer to Applicant's copy of the 1449 submitted herein.

Responses to Election/Restriction

4. Applicant's election with traverse of election of Group III claims 13-15 and 17, in part, in the reply filed on July 18, 2008 is acknowledged. Election of the compound of Example 7, i.e., 1-methyl-3-(n-butyl) imidazolium ion and x is 0.6, as the single species is also acknowledged. The traversal is on the grounds that the search and examination Group I-III is not unduly burdensome. This is found not persuasive, and the reasons are given *infra*.

Claims 1-21 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 13-15 and 17, in part, are drawn to compounds of formula (1).

The claims 1-21 herein lack unity of invention under PCT rule 13.1 and 13.2 since the compounds defined in the claims lack a significant structural element qualifying as the special technical feature that defines a contribution over the prior art, see Hirano et al. CAS: 123:2847a. Hirano et al. disclose similar alkyl imidazolium compounds of formula (I). Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Furthermore, even if unity of invention under 37 CFR 1.475(a) is not lacking, which it is lacking, under 37 CFR 1.475(b) a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations:

(1) A product and a process specially adapted for the manufacture of said product', or

(2) A product and a process of use of said product; or

(3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or

(4) A process and an apparatus or means specifically designed for carrying out the said process; or

(5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process.

And, according to 37 CFR 1.475(c)

if an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b), unity of invention might not be present.

However, it is noted that unity of invention is considered lacking under 37 CFR 1.475(a) and (b). Therefore, since the claims are drawn to more than a product, and according to 37 CFR 1.475 (e) the determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

The claims lack unity of invention and should be limited to only a product, or a process for the preparation, or a use of the said product. In the instant case, Groups I-VI are drawn to various products (i.e., imidazole compounds), processes of making (i.e., formula (7) or (3)), and the final products do not contain a common technical feature or structure, and do not define a contribution over the prior art, i.e., similar phosphoric acid ester compounds. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Claims 13-15 and 17, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 13-15 and 17, in part, not embraced in above elected subject matter, and claims 1-12, 16, and 18-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The requirement is still deemed proper.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-15 and 17 are rejected under 35 U.S.C. 102(a) as being anticipated by Urahata et al. CAS: 140:303126. Moreover, claims 13-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by (1) Hirano et al. CAS: 123:2847a; (2) Miyauchi et al. CAS: 139:395934; (3)Hagiwara et al. CAS: 138:45060; or (4) Mori et al. CAS: 114:216779.

Applicants claim compounds of formula (1), see claim 13.

Urahata et al. disclose a compound, see RN: 676316-93-1. It clearly anticipate the instant compounds of formula (1), wherein the variable R1-R5 independently represent hydrogen or alky, and the variable x is 1.

Hirano et al. disclose a compound, see RN: 163490-15-1. It clearly anticipate the instant compounds of formula (1), wherein the variable R1-R5 independently represent hydrogen or alky, and the variable x is 1.

Miyauchi et al. disclose two compound, see RN: 625120-69-6 or 625120-70-9. It clearly anticipate the instant compounds of formula (1), wherein the variable R1-R5 independently represent hydrogen or alky, and the variable x is 1.

Hagiwara et al. disclose a compound, see RN: 478482-64-3. It clearly anticipate the instant compounds of formula (1), wherein the variable R1-R5 independently represent hydrogen or alky, and the variable x is 1.

Mori et al. disclose a compound, see RN: 133316-65-1. It clearly anticipate the instant compounds of formula (1), wherein the variable R1-R5 independently represent hydrogen or alky, and the variable x is 1. Dependent claims 14-15 and 17 are also rejected along with claim 13 under 35 U.S.C. 102(a) or 102(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirano et al. CAS: 123:2847a.

Applicants claim compounds of formula (1), see claim 13.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hirano et al. disclose compounds of formula (I), i.e.,  , wherein the variable R1-R2 is C1-6-alkyl, and the variable X is halide.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant claims and Hirano et al. is that the instant variable x is $0,x\leq 1$, while Hirano et al. represents 1. Hirano et al. compounds inherently overlap with the instant invention.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 13-15 and 17 prima facie obvious because one would be motivated to employ the compounds of Hirano et al. to obtain instant processes compounds of formula (1). Dependent claims 14-15 and 17 are also rejected along with claim 35 under 35 U.S.C. 103(a).

The motivation to make the claimed processes derived from the known compounds of Hirano et al. would possess similar activity (used as electronic materials) to that which is claimed in the reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rei-tsang Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/REI-TSANG SHIAO /

Rei-tsang Shiao, Ph.D.
Primary Patent Examiner
Art Unit 1626

October 14, 2008